EXHIBIT 8-b to PLAINTIFFS'
APPENDIX OF EXPERT REPORTS

Errata Sheet for the 08.03.2020 Expert Report of Thomas McGuire, Ph.D.

Page Number	Location	Harm Valuation Changes		Reason Thereof
		Now Reads	Should Read	
6	¶13	I estimate, to a reasonable degree of certainty in the area of applied microeconomics, that the magnitude of the net economic costs imposed by the sales and distribution of prescription opioid products over the period 2006-2018 is approximately $4.17 billion.	I estimate, to a reasonable degree of certainty in the area of applied microeconomics, that the magnitude of the net economic costs imposed by the sales and distribution of prescription opioid products over the period 2006-2018 is approximately $3.577 billion.	Input change in Dr. Keyes' report.
7, 59	Table 1	Excess Mortality…$3,437.8 Excess Morbidity… $501.3 Total… $4,169.2	Excess Mortality…$2,853.0 Excess Morbidity… $494.0 Total… $3,577.2	Input change in Dr. Keyes' report. See Table 1 below
8	Figure 1	Mortality …82.46% Morbidity …12.02% Property Value Loss …2.21% Crime …1.86% Child Maltreatment …1.39% NAS …0.06%	Mortality …79.76% Morbidity …13.81% Property Value Loss …2.58% Crime …2.16% Child Maltreatment …1.62% NAS …0.07%	Input change in Dr. Keyes' report. See Figure 1 below
8	¶15	…over this 13-year period, to approximately $43 thousand per person in the Community.	…over this 13-year period, to approximately $37 thousand per person in the Community.	Input change in Dr. Keyes' report.
20	¶39	Over the entire time period, over half of deaths, approximately 85.4% (556/651) were due directly to prescription opioids. 52 deaths were from a non-prescription opioid that were attributable to the user starting on prescription opioids	Over the entire time period, over half of deaths, approximately 53.3% (347/651) were due directly to prescription opioids. 163 deaths were from a non-prescription opioid that were attributable to the user starting on prescription opioids	Input change in Dr. Keyes' report. See Table 2 below
20	Table 2	Changes in mortality counts from 2013-2018. See Table 2 below	Changes in mortality counts from 2013-2018. See Table 2 below	Input change in Dr. Keyes' report. See Table 2 below
21	¶41	The figure conveys visually that the vast majority of the deaths were directly due to prescription opioids.	The figure conveys visually that the vast majority of the deaths were ~~directly~~ due to prescription opioids.	Input change in Dr. Keyes' report.
21	Figure 3	Changes in mortality counts from 2013-2018. See Figure 3 below	Changes in mortality counts from 2013-2018. See Figure 3 below	Input change in Dr. Keyes' report. See Figure 3 below

Page	Reference	Original	Correction	Note
22	¶43	Over this 13-year time period, the measure of the economic value of lost lives is over $3.43 billion for Cabell County	Over this 13-year time period, the measure of the economic value of lost lives is over $2.85 billion for Cabell County	Input change in Dr. Keyes' report. See Table 3 below
24	Figure 5	Cabell County Series, Year 2010: 0.053	Cabell County Series, Year 2010: 0.043	Input change in Dr. Keyes' report. See Figure 5 below
25	Table 4	2010 All OUD Cases: 5,089	2010 All OUD Cases: 4,162	Input change in Dr. Keyes' report. See Table 4 below
25	Table 4	2010 OUD cases directly due to prescription opioids: 4,867	2010 OUD cases directly due to prescription opioids: 3,981	Input change in Dr. Keyes' report. See Table 4 below
25	Table 4	2010 OUD cases due to non-prescription opioids: 222	2010 OUD cases due to non-prescription opioids: 181	Input change in Dr. Keyes' report. See Table 4 below
25	Table 4	2010 OUD cases due to non-prescription opioids attributable to prescription opioids: 118	2010 OUD cases due to non-prescription opioids attributable to prescription opioids: 97	Input change in Dr. Keyes' report. See Table 4 below
29	¶54	Over this time period, the measure of the economic cost of excess health care use is over $501 million for Cabell County.	Over this time period, the measure of the economic cost of excess health care use is over $494 million for Cabell County.	Input change in Dr. Keyes' report. See Table 5 below
30	Table 4	2010 Total OUD cases due to prescription opioids: 4,985	2010 Total OUD cases due to prescription opioids: 4,078	Input change in Dr. Keyes' report. See Table 4 below
58	¶106	Over these thirteen years, the costs attributable to the sales and distribution of prescription opioids in the Cabell Huntington Community totaled over $4.17 billion dollars, implying a cost of over $43 thousand per Cabell Huntington Community resident.	Over these thirteen years, the costs attributable to the sales and distribution of prescription opioids in the Cabell Huntington Community totaled over $3.577 billion dollars, implying a cost of over $37 thousand per Cabell Huntington Community resident.	Input change in Dr. Keyes' report.
58	¶107	If I use the cost for 2018 as an estimate of the costs for each of 2019 and 2020, my estimates increase by $1.7 billion	If I use the cost for 2018 as an estimate of the costs for each of 2019 and 2020, my estimates increase by $1.2 billion	Input change in Dr. Keyes' report.
63	¶112	Ongoing harms of more than $4 billion imposed on a small community over 13 years establish that the harms from prescription opioids are of sufficient magnitude to constitute a public nuisance. The population of the Cabell Huntington Community was 96,619 in 2018. The costs reported in Table 1 amounted, over	Ongoing harms of more than $3.5 billion imposed on a small community over 13 years establish that the harms from prescription opioids are of sufficient magnitude to constitute a public nuisance. The population of the Cabell Huntington Community was 96,619 in 2018. The costs reported in Table 1 amounted, over	Input change in Dr. Keyes' report.

		Now Reads	Should Read	
		the period covered in my Report, to approximately $43 thousand per person in the Community. These costs are net of any economic benefits from workforce participation.	the period covered in my Report, to approximately $37 thousand per person in the Community. These costs are net of any economic benefits from workforce participation.	

Typographical and Citation Changes

Page Number	Location	Now Reads	Should Read	Reason Thereof
15	¶30, Ft. 39	Expert Report of Professor Katherine Keyes, in this matter, August 3, 2020 (hereafter Keyes Report). p. 7.	Expert Report of Professor Katherine Keyes, in this matter, August 3, 2020 (hereafter Keyes Report). p. 8.	Correction of citation
16	¶31, Ft. 42	Keyes Report, Opinion 5, p. 5.	Keyes Report, Opinion 5, p. 6.	Correction of citation
17	¶33, Ft. 48	Keyes Report, p. 44 contains a discussion of the causal link between prescription opioids and subsequent heroin use.	Keyes Report, p. 46-50 contains a discussion of the causal link between prescription opioids and subsequent heroin use.	Correction of citation
18	¶36, Ft. 56	Keyes Report, Figure 8. See page 31 of her report for a description of the methodology and sources for these figures.	Keyes Report, Figure 8. See page 33 of her report for a description of the methodology and sources for these figures.	Correction of citation
19-20	¶37, Ft. 58	Keyes Report, p. 48.	Keyes Report, p. 50.	Correction of citation
22	¶43, Ft. 63	The HHS Guidelines report lower and upper bounds for national a VSL of $4.4 million and $14.2 million for 2014. Using these values instead of the average used above results in an economic value of lost lives of $1.6 billion and $5.3 billion, respectively. Note that the number of intentional deaths data in Cabell County are too few to determine a reliable estimate. Data are suppressed due to small numbers in several years during this period. I therefore make no adjustments for intentional deaths in this report. See Keyes Report, p. 33.	The HHS Guidelines report lower and upper bounds for national a VSL of $4.4 million and $14.2 million for 2014. Using these values instead of the average used above results in an economic value of lost lives of $1.6 billion and $5.3 billion, respectively. Note that the number of intentional deaths data in Cabell County are too few to determine a reliable estimate. Data are suppressed due to small numbers in several years during this period. I therefore make no adjustments for intentional deaths in this report. See Keyes Report, p. 35.	Correction of citation
23	¶45. Ft. 64	See Keyes Report, Section III, pp. 7-8 for a discussion on the distinction between OUD, opioid abuse, and opioid dependence, which are defined *disorders*. Professor Keyes also	See Keyes Report, Section III, pp. 8-9 for a discussion on the distinction between OUD, opioid abuse, and opioid dependence, which are defined *disorders*. Professor Keyes also	Correction of citation

		discusses related *symptoms*, such as physical opioid dependence, opioid tolerance, and withdrawal which are included in the definition of OUD.	discusses related *symptoms*, such as physical opioid dependence, opioid tolerance, and withdrawal which are included in the definition of OUD.	
24	¶47, Ft. 68-69	Keyes Report, Figure 14 (p. 42).	Keyes Report, Figure 14 (p. 44).	Correction of citation
25	¶47, Ft. 70	Keyes Report, p. 48.	Keyes Report, p. 49-50.	Correction of citation
25	¶47, Ft. 71	See Keyes Report, pp. 47-48, for a description of the methodology used to compile these estimates.	See Keyes Report, pp. 48-50, for a description of the methodology used to compile these estimates.	Correction of citation
39	¶72, Ft. 123	Keyes Report, p. 36.	Keyes Report, p. 38.	Correction of citation
41	¶73, Ft. 131	H. Uebel, *et al.*, *op. cit.* Professor Keyes discusses the adverse downstream consequences at length in her report (Keyes Report, p. 36).	H. Uebel, *et al.*, *op. cit.* Professor Keyes discusses the adverse downstream consequences at length in her report (Keyes Report, p. 38).	Correction of citation
42	Table 7 Footnote	Sources: Keyes Report, Table 1 and Appendix C, Tables C.III.1 - C.III.3	Sources: Keyes Report, Table 1; Appendix C, Table C.III.1; Quantitative Backup, Tables C. III.2 - C.III.3	Correction of typographical error
Quantitative Backup. Sheet: 'Mortality – Q'	Source: [1], [2], [4]	Keyes Report, Figure 14.	Keyes Report, Figure 16.	Correction of typographical error
Quantitative Backup. Sheet: 'Morbidity - $'	Source [2]	[2] = [1] * Table CII.5	[2] = [1] * Table CII.5 [11]	Correction of typographical error
Quantitative Backup. Sheet: 'Morbidity - $'	Source [3]	[3] = [1] * Table CII.5 [11]	[3] = [1] * Table CII.5 [10]	Correction of typographical error

Table 1
Monetary Value of the Net Economic Costs Attributed to the
Sales and Distribution of Prescription Opioids
in the Cabell Huntington Community
2006-2018

Harms Due to Sales & Distribution of Prescription Opioids	Valuation ($millions)
Excess deaths	$2,853.0
Excess morbidity	$494.0
Excess neonatal abstinence syndrome	$2.6
Excess crimes	$77.4
Excess property value loss	$92.3
Excess child maltreatment	$57.9
Total	**$3,577.2**

Sources: Tables 3, 5, 7, 8, 9, and Section III.E of this Report.

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Figure 1
Percentage Value of Each Harm Attributed to the Sales and Distribution of Prescription Opioids in the Cabell Huntington Community 2006-2018
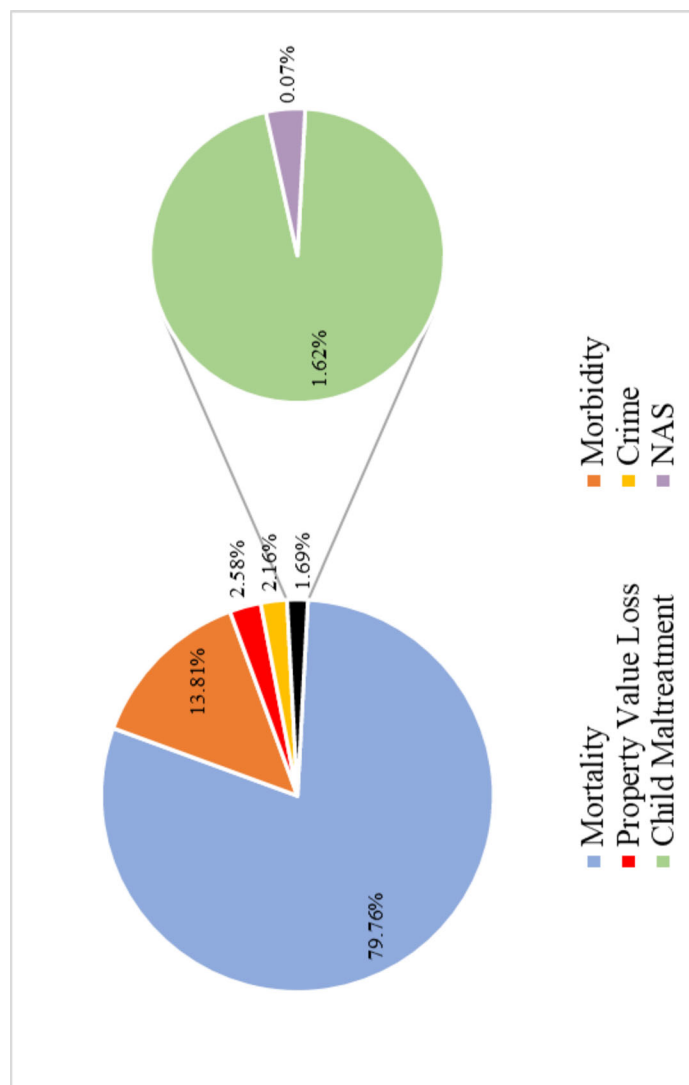
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Table 2
Deaths due to Prescription Opioids in Cabell County
2006-2018

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
All deaths due to opioids	21	37	25	5	25	36	22	42	45	69	87	132	105	**651**
Deaths directly due to prescription opioids	20	33	25	5	23	29	18	24	28	32	36	42	32	**347**
Deaths due to non-prescription opioids	1	4	0	0	2	7	4	18	17	37	51	90	73	**304**
Deaths due to non-prescription opioids due to prescription opioids	1	2	0	0	1	4	2	10	9	20	27	48	39	**163**
Total deaths due to prescription opioids	**21**	**35**	**25**	**5**	**24**	**33**	**20**	**34**	**37**	**52**	**63**	**90**	**71**	**510**

Sources: Keyes Report, Figure 16.

Figure 3
Deaths Due to Prescription Opioids in Cabell County
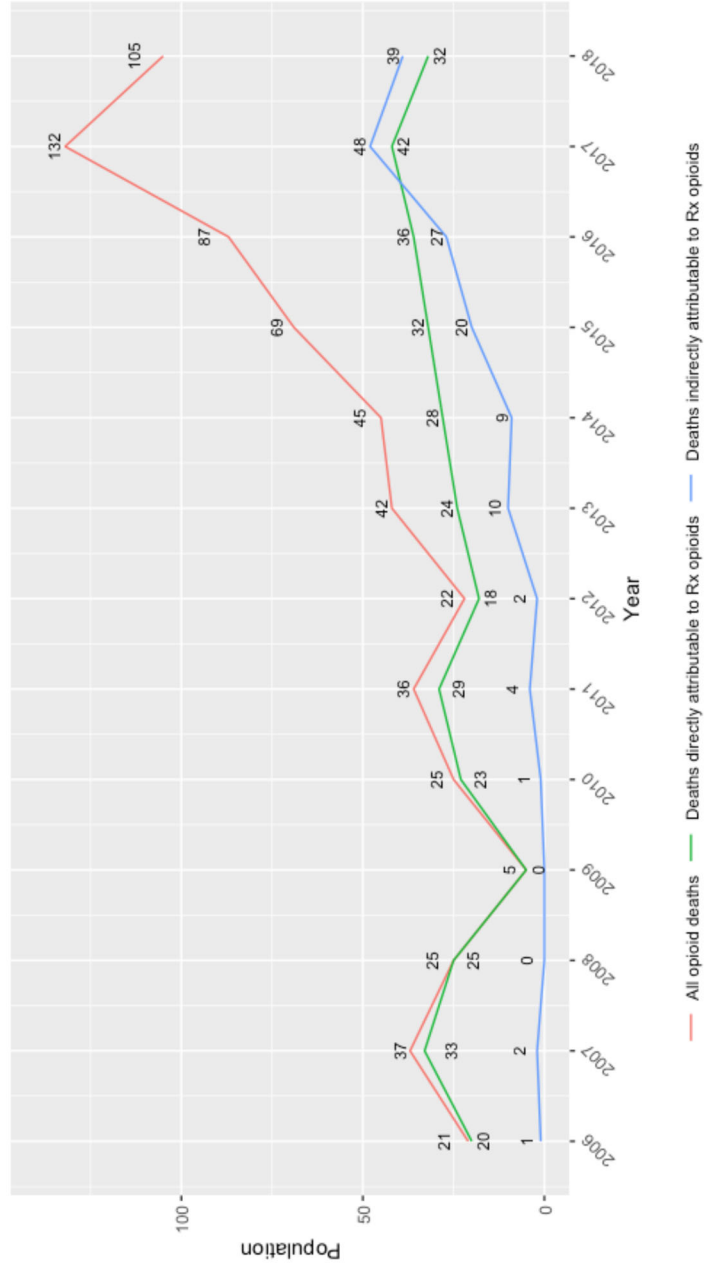**2006-2018**
Replication of Keyes Report, Figure 16

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Table 3

Valuation of Mortality Due to Prescription Opioids in Cabell County

2006-2018

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Total deaths attributed to prescription opioids	21	35	25	5	24	33	20	34	37	52	63	90	71	510
VSL ($millions)	$4.6	$3.9	$4.2	$4.8	$5.2	$5.7	$5.4	$6.3	$5.1	$6.3	$6.4	$5.2	$6.5	
Valuation ($millions)	$96.1	$137.5	$104.6	$24.0	$125.5	$186.6	$107.2	$212.9	$190.2	$329.1	$403.4	$471.9	$464.0	$2,853.0

Sources: Keyes Report, Figure 16. Appendix C, Table C.I.1

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Figure 5
OUD Prevalence
National, West Virginia and Cabell County
Replication of Keyes Report, Figure 13
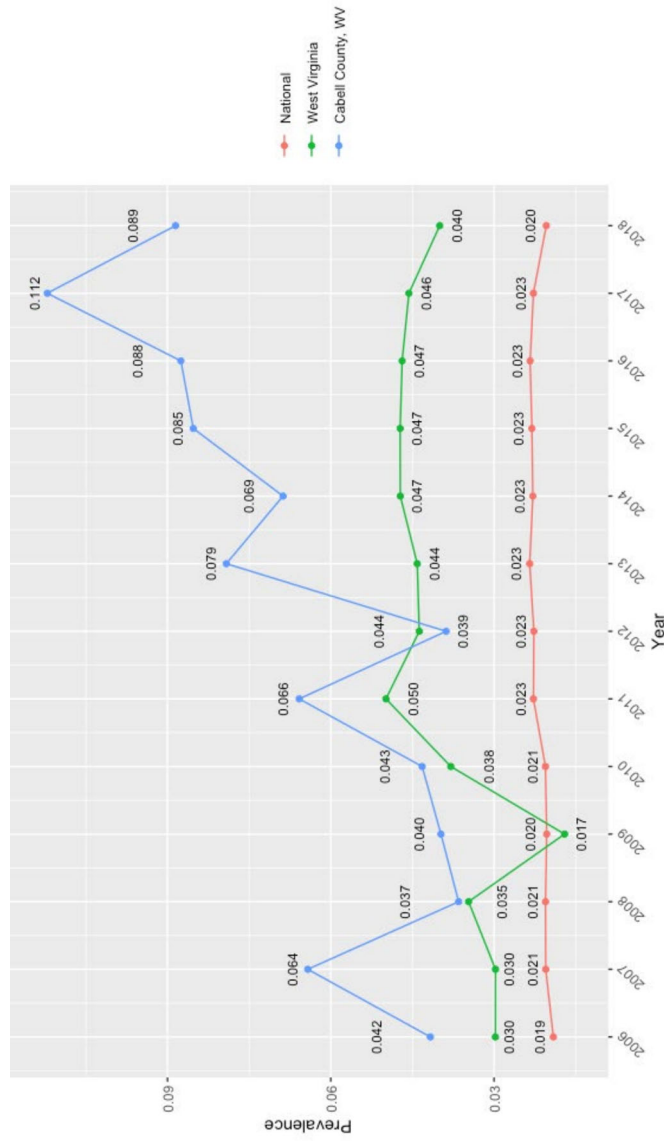
Table 4
Morbidity Due to Prescription Opioids in Cabell County
2006-2018

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
All OUD cases	3,959	6,105	3,475	3,819	4,162	6,359	3,763	7,692	6,677	8,257	8,403	10,643	8,252	81,566
OUD cases directly due to prescription opioids	3,745	5,776	3,385	3,721	3,981	6,083	3,264	6,674	5,267	6,076	5,711	7,156	5,800	66,639
OUD cases due to non-prescription opioids	214	329	90	98	181	276	499	1,018	1,410	2,181	2,692	3,487	2,452	14,927
OUD cases due to non-prescription opioids due to prescription opioids	114	176	48	52	97	147	266	544	753	1,164	1,437	1,862	1,309	7,969
Total OUD cases due to prescription opioids	**3,859**	**5,952**	**3,433**	**3,773**	**4,078**	**6,230**	**3,530**	**7,218**	**6,020**	**7,240**	**7,148**	**9,018**	**7,109**	**74,608**
Share of OUD cases due to prescription opioids	97.5%	97.5%	98.8%	98.8%	98.0%	98.0%	93.8%	93.8%	90.2%	87.7%	85.1%	84.7%	86.1%	91.5%

Sources: Keyes Report, Figure 14.

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Table 5
Morbidity and Excess Health Care Costs Attributed to the
Sales and Distribution of Prescription Opioids
Cabell County, 2006–2018

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Total OUD cases due to prescription opioids	3,859	5,952	3,433	3,773	4,078	6,230	3,530	7,218	6,020	7,240	7,148	9,018	7,109	74,608
Share of OUD cases covered by Medicare/Commercial payers	43.6%	39.0%	43.8%	43.8%	39.3%	40.9%	38.9%	37.7%	34.9%	34.5%	34.4%	32.0%	32.0%	
Share of OUD cases covered by Medicaid/Uninsured	56.4%	61.0%	56.3%	56.3%	60.7%	59.1%	61.1%	62.3%	65.1%	65.5%	65.6%	68.0%	68.0%	
Excess health care costs per OUD case covered by Medicare/Commercial payers	$13,567	$12,914	$11,761	$11,781	$12,017	$10,866	$10,344	$8,878	$8,878	$8,878	$8,878	$8,878	$8,878	
Excess health care costs per OUD case covered by Medicaid/Uninsured	$6,044	$5,753	$5,240	$5,249	$5,354	$4,841	$4,609	$3,955	$3,955	$3,955	$3,955	$3,955	$3,955	
Total excess health care costs due to prescription opioids ($ mil)	**$36.0**	**$50.9**	**$27.8**	**$30.6**	**$32.5**	**$45.5**	**$24.2**	**$41.9**	**$34.2**	**$40.9**	**$40.4**	**$49.9**	**$39.3**	**$494.0**

Source: Keyes Report, Figure 14 and Appendix C, Tables C.II.4 and C.II.5